

ABSTRACT

In mass spectrometry which allows ionization of a sample without using any matrix, there are provided (i) a sample target which improves efficiency and stability of the ionization so as to be more practical and (ii) a production method thereof. The sample target includes, as a sample support surface, a surface which is used to support a sample in ionizing the sample on the basis of laser irradiation so as to perform mass spectrometry and which has a finely bumpy structure of an order ranging from nanometer to several dozen micrometer, wherein a face of the sample support surface is coated with metal. Further, the bumpy structure of the sample support surface is preferably arranged so that a plurality of concave portions are regularly formed so as to have an interval of not less than 1nm and less than 30 μ m. In the sample target, the concave portion has a trench shape, a lattice shape, or a cylindrical or prismatic shape. The sample target is produced in accordance with lithography.